

### **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-32 (Cancelled)

33. (New) A kaolin product comprising at least one particulate kaolin clay having a particle size distribution such that at least 80% by weight of the particles have an equivalent spherical diameter less than 2  $\mu\text{m}$  and a shape factor of at least 45.

34. (New) The kaolin product according to claim 33, wherein the product is a pigment product.

35. (New) The kaolin product according to claim 33, wherein at least 8% by weight of the particles of the product have an equivalent spherical diameter less than 0.25  $\mu\text{m}$ .

36. (New) The kaolin product according to claim 33, wherein at least 12% by weight of the particles of the product have an equivalent spherical diameter less than 0.25  $\mu\text{m}$ .

37. (New) The kaolin product according to claim 33, wherein at least 84% by weight of the particles have an equivalent spherical diameter less than 2  $\mu\text{m}$ , and at least 60% by weight of the particles have an equivalent spherical diameter less than 1  $\mu\text{m}$ .

38. (New) The kaolin product according to claim 33, wherein from 15% to 35% by weight of the particles have an equivalent spherical diameter less than 0.25  $\mu\text{m}$ .

39. (New) The kaolin product according to claim 33, wherein at least 50% by weight of the particles have an equivalent spherical diameter ranging from 0.75  $\mu\text{m}$  to 0.25  $\mu\text{m}$ .

40. (New) The kaolin product according to claim 33, wherein the mean equivalent spherical diameter of the particles of the product ranges from 0.3  $\mu\text{m}$  to 0.8  $\mu\text{m}$ .

41. (New) The kaolin product according to claim 33, wherein the shape factor of the particles of the product is at least 50.

42. (New) The kaolin product according to claim 41, wherein the shape factor ranges from 55 to 65.

43. (New) The kaolin product according to claim 33, wherein the particles have a BET surface area of at least 12  $\text{m}^2/\text{g}$ .

44. (New) The kaolin product according to claim 43, wherein the BET surface area ranges from 15  $\text{m}^2/\text{g}$  to 20  $\text{m}^2/\text{g}$ .

45. (New) A kaolin product comprising at least one particulate kaolin having a particle size distribution such that at least 80% by weight of the particles have an equivalent spherical diameter less than 2  $\mu\text{m}$  and not less than 8% by weight of the

particles have an equivalent spherical diameter less than 0.25  $\mu\text{m}$  and a shape factor of at least 45.

46. (New) The kaolin product according to claim 45, wherein the product is a pigment product.

47. (New) The kaolin product according to claim 44, wherein at least 12% by weight of the particles of the product have an equivalent spherical diameter less than 0.25  $\mu\text{m}$ .

48. (New) The kaolin product according to claim 44, wherein at least 84% by weight of the particles have an equivalent spherical diameter less than 2  $\mu\text{m}$ , and at least 60% by weight of the particles have an equivalent spherical diameter less than 1  $\mu\text{m}$ .

49. (New) The kaolin product according to claim 45, wherein from 15% to 35% by weight of the particles have an equivalent spherical diameter less than 0.25  $\mu\text{m}$ .

50. (New) The kaolin product according to claim 45, wherein at least 50% by weight of the particles have an equivalent spherical diameter ranging from 0.25  $\mu\text{m}$  to 0.75  $\mu\text{m}$ .

51. (New) The kaolin product according to claim 45, wherein the mean equivalent spherical diameter of the particles of the product ranges from 0.3  $\mu\text{m}$  to 0.8  $\mu\text{m}$ .

52. (New) The kaolin product according to claim 45, wherein the shape factor of the particles of the product is at least 50.

53. (New) The kaolin product according to claim 52, wherein the shape factor ranges from 55 to 65.

54. (New) The kaolin product according to claim 44, wherein the particles have a BET surface area of at least 12 m<sup>2</sup>/g.

55. (New) The kaolin product according to claim 54, wherein the BET surface area ranges from 15 m<sup>2</sup>/g to 20 m<sup>2</sup>/g.

56. (New) A coating composition comprising at least one aqueous suspension of a particulate pigment comprising at least one particulate kaolin having a particle size distribution such that at least 80% by weight of the particles have an equivalent spherical diameter less than 2 µm and a shape factor of at least 45, and a binder.

57. (New) The coating composition according to claim 56, wherein the binder is hydrophilic.

58. (New) The composition according to claim 56, wherein the binder forms from 4% to 30% of the solid content of the composition on a dry weight basis.

59. (New) The composition according to claim 56, wherein the solid content of the composition ranges from 60% to 90% by weight of the composition.

60. (New) The composition according to claim 56, wherein at least 80% by weight of the coating composition comprises the pigment.

61. (New) The composition according to claim 56, wherein the binder comprises a modified or unmodified starch.

62. (New) The composition according to claim 56, wherein the binder comprises a starch-free binder.

63. (New) A method of using the coating composition according to claim 56 comprising applying the composition to coat a sheet of paper and calendaring the paper to form a gloss coating thereon.

64. (New) A method of producing a kaolin product which comprises:

(a) subjecting a particulate kaolin clay suspension to attrition grinding using a particulate grinding medium by a process in which the average shape factor of the kaolin clay is increased by at least 10;

(b) separating the suspension from the particulate grinding medium; and

(c) dewatering the suspension to recover the kaolin product therefrom.

65. (New) The method according to claim 64, wherein the kaolin product is a pigment product.

66. (New) The method according to claim 64, further comprising, mixing a raw or partially processed kaolin clay with water to form an aqueous suspension prior to (a).

67. (New) The method according to claim 64, wherein the kaolin clay suspension comprises a particulate sedimentary kaolin clay.

68. (New) The method according to claim 67, wherein the kaolin clay comprises particles having an equivalent spherical diameter such that not more than 40% by weight have an equivalent spherical diameter larger than 10  $\mu\text{m}$ , and not more than 50% by weight have an equivalent spherical diameter less than 2  $\mu\text{m}$ .

69. (New) The method according to claim 67, wherein the particles of the kaolin clay have a shape factor of not greater than 15.

70. (New) The method according to claim 67, further comprising purifying the kaolin clay before subjecting the particulate kaolin clay to attrition grinding.

71. (New) The method according to claim 70, wherein the purifying comprises froth floating or magnetic separation or both.

72. (New) The method according to claim 67, further comprising treating the kaolin clay with liquid working following (b) or (c).

73. (New) The method according to claim 67, further comprising comminuting the kaolin clay to provide delamination prior to grinding.

74. (New) The method according to claim 73, wherein the comminuting comprises wet grinding in a suspension containing not more than 40% by weight solid, wherein the wet grinding is carried out using a particulate grinding medium under conditions in which no substantial vortex is set up in the suspension.

75. (New) The method according to claim 73, wherein the comminuting results in an energy dissipation of less than 75 kWh per ton of kaolin present on a dry weight basis.

76. (New) The method according to claim 73, wherein the comminuting is carried out under conditions wherein a vortex is formed in the suspension.

77. (New) The method according to claim 76, wherein the comminuting results in an energy dissipation ranging from 40 kWh to 120 kWh per ton of kaolin clay present in a dry weight basis.

78. (New) The method according to claim 66, further comprising addition of from 99 to 50 parts by weight of the kaolin clay with from 1 to 50 parts by weight of a further particulate kaolin clay having a shape factor of at least 15 and having at least 85% by weight of particles smaller than 2  $\mu\text{m}$  and at least 20% by weight of particles smaller than 0.25  $\mu\text{m}$ .

79. (New) The method according to claim 78, wherein the additional kaolin clay is added prior to (a).

80. (New) The method according to claim 78, wherein the additional kaolin clay is added following (b) or (c).